



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/006,396	12/10/2001	Daniel Kopf	111399	8273
25944	7590	08/25/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER NGUYEN, DUNG T	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 08/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.A

Office Action Summary

Application No.

10/006,396

Applicant(s)

KOPF ET AL.

Examiner

Dung (Michael) T. Nguyen

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-8, 14-32 and 40-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-8, 14-32 and 40-42 is/are allowed.
- 6) ☒ Claim(s) 43-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments with respect to claims 43-57 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 43-48, 51, and 55-57 are rejected under 35 U.S.C. 102(b) as being anticipated by Wallace et al. (5103457).

With respect to claim 43, Wallace show in Fig.2-4 a laser means 104 for producing a high aspect ratio beam 108 comprising a diode pumping array (col.5, 1.40) and optical means 110 for imaging a pump light beam into a substantially asymmetrical spot with a smooth intensity profile (col.6, 1.25-27); and a laser medium 116 which is excited by said pump light beam, wherein an axis of the pump light beam is positioned at least one of obliquely and vertically to an axis of the fundamental mode (col.6, 1.22-49).

With respect to claim 44, col.6, 1.24-30 discloses the fundamental mode is the beam elliptical into the gain 116.

With respect to claims 45-46, claim 21 discloses the aspect ratio of >15:1 (400:1).

With respect to claim 47, Fig.4 discloses the cavity forming means 102.

With respect to claim 48, col.7, l.45-48 discloses the heatsink.

With respect to claim 51, Fig.7 discloses the multiple bounce configuration.

With respect to claim 55, col.6, l.14 discloses the modelocking device.

With respect to claim 56, col.6, l.13 discloses a saturable absorber mirror (a Q-switch).

With respect to claim 57, col.6, l.14 discloses a frequency conversion device (frequency doubling crystal).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 49-50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallace et al. (5103457) in view of Beach et al. (6347109).

Art Unit: 2828

With respect to claim 49, Wallace disclose all limitations of the claim except for the pump light beam is incident on a top side of the laser medium.

Beach teach the pump light beam 10 is incident on a top side of the laser medium 16 in Fig.2.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Wallace what is taught by Beach to have an alternative way of pumping the gain medium.

With respect to claim 50, Beach disclose a thin disc laser medium 16.

With respect to claim 52, Beach disclose in Fig.2 a reflective coating 20.

Claims 53-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wallace et al. (5103457) in view of the admitted prior art.

Wallace disclose all limitations of the claims except for the heat sink is bonded the glue.

Admitted prior art teaches the bonding glue (p.10, l.14-15).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide Wallace what is taught by admitted prior art in order to securely bond the heatsink into the medium.

Art Unit: 2828

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Allowable Subject Matter

Claims 6-8, 14-32, and 40-42 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 40-42 are allowed over the Wallace, Beach, admitted prior art, and Kaestner (4185891) prior art because the fail to teach the limitations of a laser means for producing an 'elliptical high aspect ratio spot, comprising: optical means for producing a pump beam by imaging each single emitter into a same spot; wherein said optical means further includes: an upstream optical means to collimate said partial beam in a vertical plane, and a downstream

Art Unit: 2828

optical means to collimate said partial beam in a horizontal plane, focus said partial beam in the vertical plane, and direct said partial beam to said spot.

Claims 6-8 and 14-32 are found allowable because of their dependency on claims 40-42.

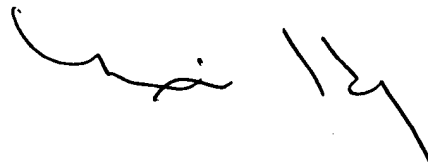
Communication Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung (Michael) T Nguyen whose telephone number is (571) 272-1949. The examiner can normally be reached on 8:30 - 17:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Min Harvey can be reached on (571) 272-1835. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.

Michael Dung Nguyen



MIN SUN OH HARVEY
PRIMARY EXAMINER